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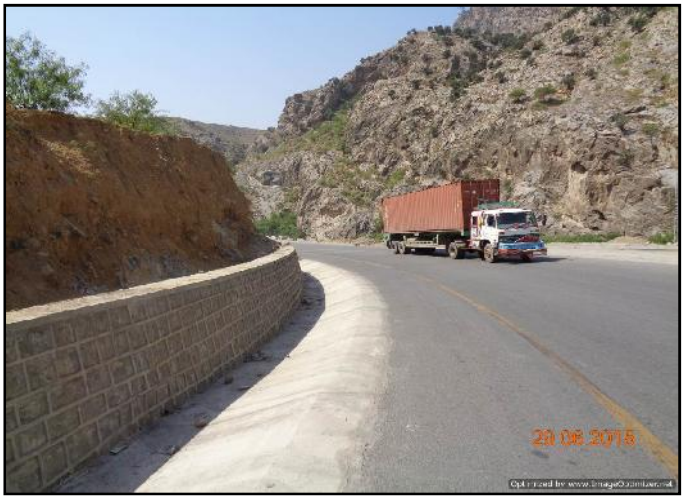
CONSTRUCTION MONITORING & EVALUATION PROGRAM

(Strengthening & Improvement of Peshawar – Torkham Road, Khyber Agency)



MONTHLY PROGRESS REPORT # 28

JULY 2015

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EXECUTIVE SUMMARY

Both flexible and rigid pavements of 41 km out of 46 km length have been substantially completed and are open for traffic. The total amount reimbursed to FWO by the end of this month was US$ 45,521,397 out of US$ 57,987,073.

PIL wise progress is as follows:

- **PIL 01** *(Section 01 km 0+000 – km 9+000)*:
  100% completed, and all milestones certified with accrued expenditure of US$ 9,978,082

- **PIL 02** *(Section 02 km 9+000 – km 14+000)*:
  100% completed, and all milestones certified with accrued expenditure of US$ 9,383,484

- **PIL 03** *(Section 03 km 14+000 – km 19+000)*:
  100% completed, and all milestones certified with accrued expenditure of US$ 9,512,705

- **PIL 04** *(Bridges at km9+560 & km23+750; Multicell culverts at km11+190 & km22+925):*
  100% completed, and all milestones certified with accrued expenditure of US$ 3,668,533

- **PIL 05** *(Section 04 km 19+000 km 21+100 & km 22+400- km 24+000 & Loop # 02; Section 05 km 21+100 - 22+400 and 24+000 - 29+000; Section 06 km 29+000- 33+000; Construction of Bridges at km 18+475, km 27+000 & km 27+250; Rehabilitation of Bridges at km 2+200, km 11+560 & km 21+320)*:
  Progress achieved during the reporting month was 1.5% attaining total physical progress 84.5% with accrued expenditure of US$ 12,978,595 out of US$ 25,444,269.

Construction activities in road Section 07 (km 33+000 - 37+000); Section 08 (km 37+000-41+000) and Section 09 (km 41+000 - 43+465) & LOOP-3 were also monitored. These sections are part of an activity agreement; however, PIL for these sections has not yet been constituted.

MATTERS REQUIRING ATTENTION

1. Constitution of Remaining PILs

As per activity agreement, US$ 87,000,000 has been obligated for the PTR project. However US$ 57,987,073 consisting of 05 PILs has been approved till reporting month. Finalization of remaining PILs for US$ 29,012,927 may be expedited as the contractor is doing the work at its own risk and cost, of course, is being monitored by AGES and reported to USAID accordingly.

2. Accelerated Construction

FWO/NESPAK has accelerated the construction activities from Sec-VII to EoP for completion of works at the cost of quality, especially the stone masonry work and backfilling. Critical activities of roadwork (asphalting & concreting) are done on the site without any supervisory staff of FWO/NESPAK.

3. Maintenance of Traffic Diversions / Detours & Environmental Issues

The detours between KM: 37+00 to EoP are not being properly maintained. Therefore, the conditions of the diversion tracks have deteriorated created difficulties for the road commuters and population. Peak hour traffic congestion and its frequency are regularly escalating the problem. An even minor traffic accident on the corridor usually results in rapid blockage of traffic movement for long hours. For smooth movement of traffic, the detours should be maintained by leveling of the road surface and sprinkling the road regularly to control dust. But FWO/NESPAK is not focused on the environmental issues. Additionally, surplus excavated materials have been dumped in natural streams and other places.

4. Pavement Distress

Premature rutting has occurred in certain reaches of the PTR. In some of the stretches, the rutted asphalt has been replaced without any investigation to identify possible factors, which caused this rutting. It is believed treating the rutted asphalt without knowing the exact cause of it is a temporary measure. Unless the cross–section of the pavement where rutting has occurred is opened up to sub-grade level and all the bounded and unbounded layers are checked for layer(s) attributing to rutting. This was suggested to FWO/NESPAK but to no avail.

5. Frequency of Materials Testing

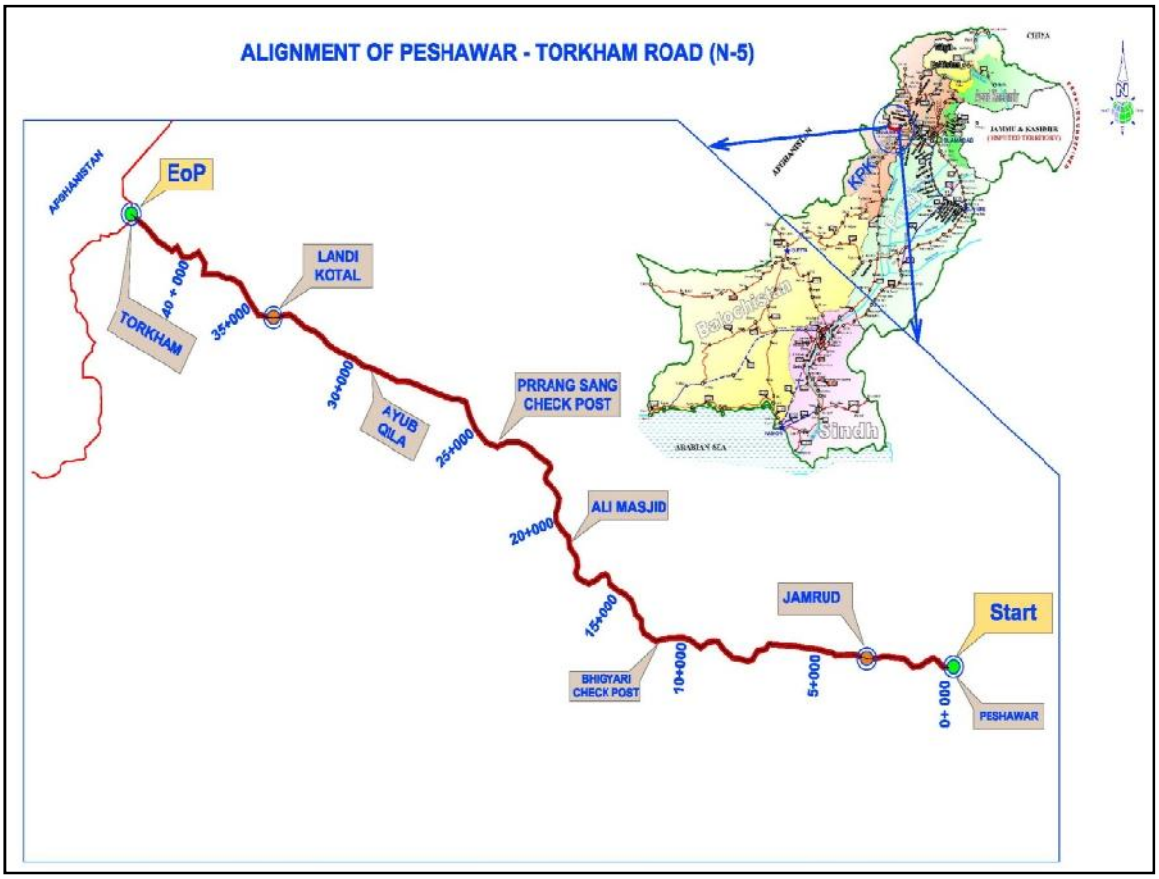
It is noted that the required frequency of testing of materials identified in the NHA specifications is not being implemented at the site by NESPAK, which has been brought to its attention.

6. Incomplete Works at Bhagiari Check Post, Road Side Drains and Backfill

Workmanship, quality issues and as-built drawings of the Bhagiari Check Post are yet to be addressed in spite of repeated requests to FWO. Moreover, proper inlets and outlet finishing details of the roadside drains have yet to be completed, and none of the Cascades for culverts given in the drawing is site-specific, a case in point is loop 3. Improper backfilling of side drains with unapproved materials was carried out, thus the payment for side drain is withheld until the issue is resolved. There is no site specific design, nor profile drawing for the roadside drain as such in some places the invert level of drain is lower than the level of outfall; in some stretches of the road, the top level of the road side drain wall is higher than the shoulder level thus preventing the surface runoff into the drain. All the above reflects very badly on the professional abilities and performance of FWO/NESPAK.

1. PROJECT BACKGROUND

The Peshawar–Torkham road is an integral part of National Highway (N-5), a vital piece of the nation's infrastructure, which connects Pakistan with Afghanistan at Torkham border and plays an important role in the economic activities as well as providing timely logistic support to the security agencies deployed in Khyber Agency. In order to strengthen and improve Peshawar road an Activity Agreement between FATA Secretariat & US Agency of International developments was signed on 18th September 2012 obligating US$ 67,000 Million for the project.



The project is implemented by FATA Secretariat as a project proponent through Frontier Works Organization (FWO) as EPC (Engineer, Procure, and Construct) Contractor. Being an EPC form of contract, FWO is fully responsible for the design and construction of the project in conformity with the NHA's specifications and standard engineering practices. NESPAK is providing design and quality control services to FWO. While AGES Consultants has been entrusted with the Construction Monitoring and Evaluation Services, including Quality Assurance and Environmental Monitoring of the project on behalf of the USAID Pakistan Mission by signing agreement on 30th September 2012. Construction activities by the contractor started on October 15, 2012. Initially agreed completion date of December 31, 2014, as per Article 4 of the Activity Agreement No AID-015-DOD has now been extended to 31 December 2015.

1.1 Scope of Work

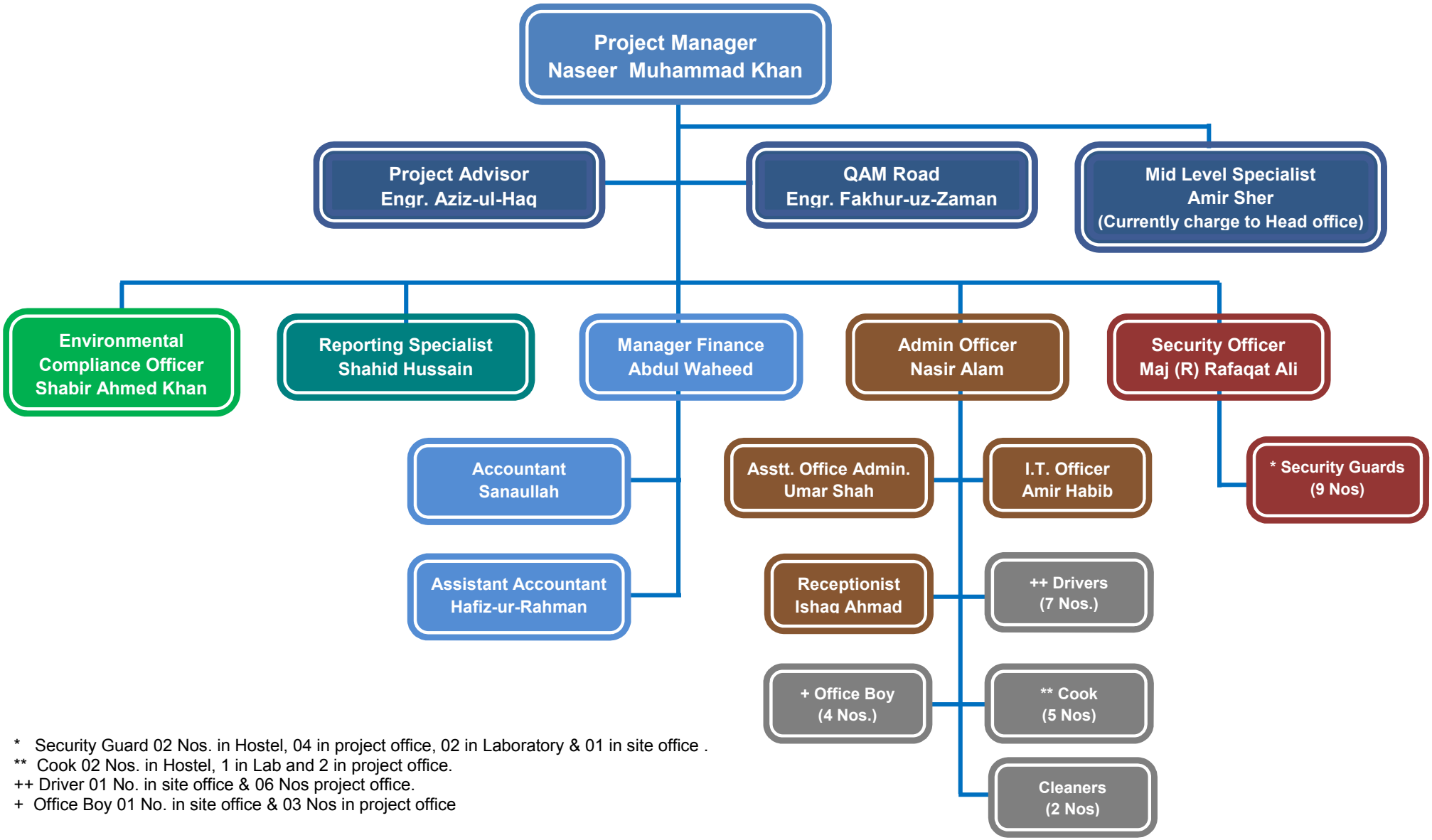
As per activity agreement the 46 km Peshawar – Torkham road has been split into multiple sections for designing / construction purposes. PIL wise detail is given in the table below:

PIL No	Components	Allocated Amount US$	PIL Signing Date	PIL Expiry Date
PIL 01	a) Section 01 (km 0+000 - km 9+000)	9,978,082	Jan 10, 2013	Dec 31, 2014
PIL 02	a) Section 02 (km 9+000 - km 14+000)	9,383,484	Dec 18, 2013	Dec 31, 2014
PIL 03	a) Section 03 (km 14+000 - km 19+000)	9,512,705	Feb 04, 2014	Dec 31, 2014
PIL 04	a) Construction of Bridge at km 9+560 b) Construction of Bridge at km 23+750 c) Multicell Culvert at km 11+190 d) Multicell Culvert km 22+925	3,668,533	Jan 27, 2014	Dec 31, 2014
PIL 05	a) Section 04 (km 19+000 – km 21+100 & km 22+400 – km 24+000 & Loop # 02) b) Section 05 (km 21+100 - km 22+400 & km 24+000 – km 29+000) c) Section 06 (km 29+000 – km 33+000) d) Construction of Bridge at km 18+475 e) Construction of Bridge at km 27+000 f) Construction of Bridge at km 27+250 g) Repair of Bridge at km 2+200 h) Repair of Bridge at km 11+560 i) Repair of Bridge at km 21+320	25,444,269	April 06, 2015	Dec 31, 2015
unapproved PIL	a) Section 07 (km 33+000 – km 37+000) b) Section 08 (km 37+000 - km 41+000) c) Section 09 (km 41+000 – km 43+465 & Loop3)	-	-	-

1.2 Mobilization of Staff

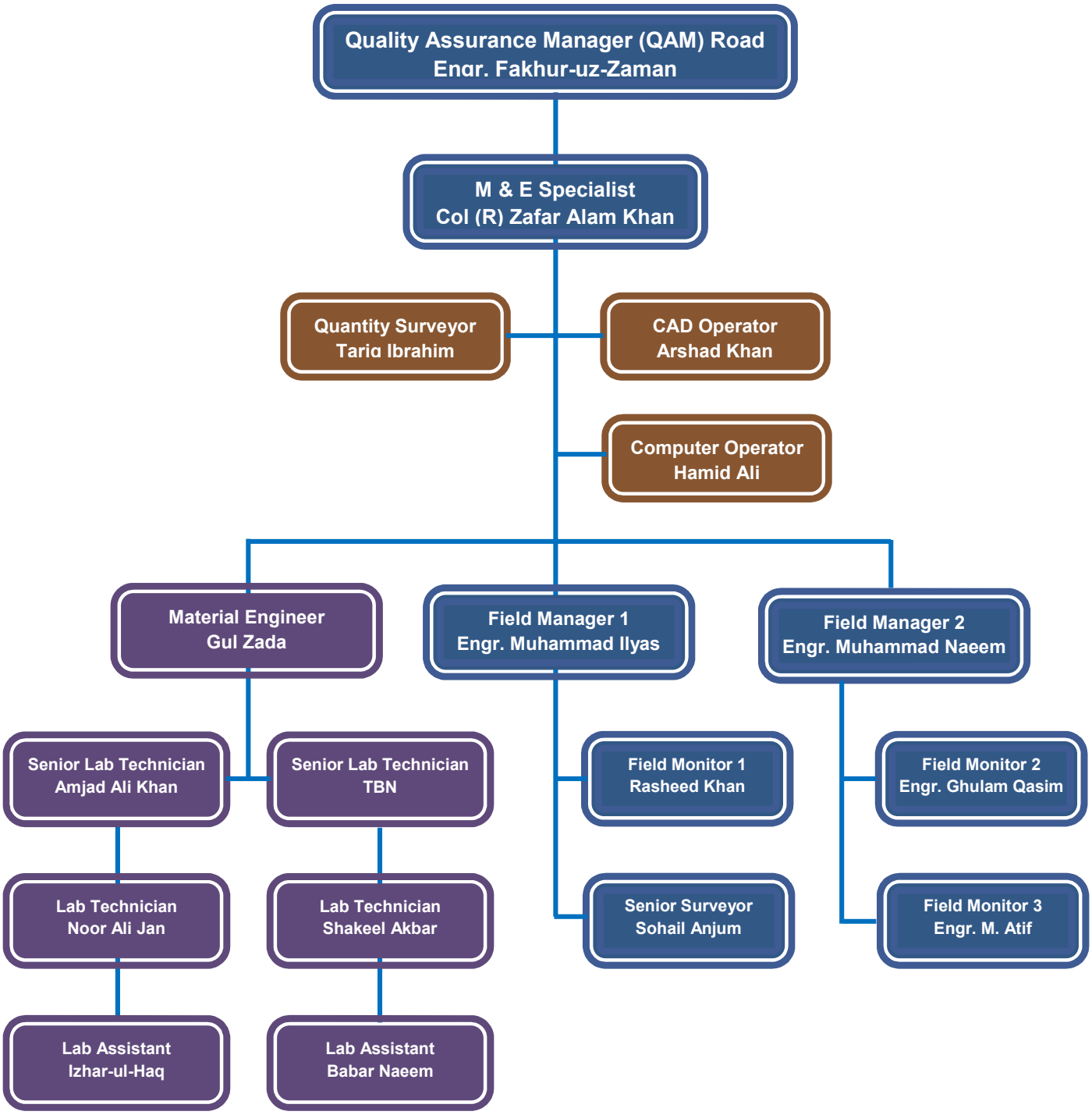
The following members of the team were mobilized as various activities of the project progressed. Other staff members will be mobilized according to the demands of work load.

Organization Chart for CMEP Office, Peshawar



* Security Guard 02 Nos. in Hostel, 04 in project office, 02 in Laboratory & 01 in site office .
** Cook 02 Nos. in Hostel, 1 in Lab and 2 in project office.
++ Driver 01 No. in site office & 06 Nos project office.
+ Office Boy 01 No. in site office & 03 Nos in project office

Organization Chart for Road Component of CMEP Project



2. PHYSICAL PROGRESS (ON GOING PIL 05)

2.1 Section IV (Km 19+000 to Km 21+100 & Km 22+400 to Km 24+000 & Loop # 02)

Sr No.	Section IV (Km 19+000 to Km 21+100 & Km 22+400 to Km 24+000 & Loop # 02)	Total No of Milestones	Till Previous Month		Current Month		Total	
			No of Milestones Achieved	Percentage Completed	No of Milestones Achieved	Percentage Completed	No of Milestones Achieved	Percentage Completed
1	Earth work	10.32	10.32	100%	-	-	10.32	100%
2	Sub base & base course							
a	Granular sub base	10.32	10.32	100%	-	-	10.32	100%
b	Water bound macadam	7.08	6.85	97%	0.23	3%	7.08	100%
c	Asphaltic base course	7.08	6.75	95%	0.33	5%	7.08	100%
3	Surface courses and pavement							
a	Asphaltic concrete for wearing course & allied activities	7.08	5.75	81%	0.65	9%	6.40	90%
b	Rigid pavement (Half Pavement Width)	6.48	5.00	77%	0.00	0%	5.00	77%
4a-i	Retaining wall (RW-2) Total L = 4025 m							
a	Retaining wall : H= 1.00 m ; L= 500m	2.00	2.00	100%	-	-	2.00	100%
b	Retaining wall : H= 1.5 m ; L= 900m	3.00	1.71	57%	0.15	5%	1.86	62%
c	Retaining wall : H= 3.0 m ; L= 50m	1.00	1.00	100%	-	-	1.00	100%
d	Retaining wall : H= 3.5 m ; L= 575m	5.75	2.91	51%	0.00	0%	2.91	51%
e	Retaining wall : H= 4.0 m ; L= 875m	8.75	6.29	72%	0.00	0%	6.29	72%
f	Retaining wall : H= 5.0 m ; L= 125m	1.00	1.00	100%	-	-	1.00	100%
g	Retaining wall : H= 6.0 m ; L= 750m	15.00	14.30	95%	0.00	0%	14.30	95%
h	Retaining wall: H= 8.0 m ; L= 250m	5.00	5.00	100%	-	-	5.00	100%
4a-ii	Breast wall - 325m	3.25	1.96	60%	0.00	0%	1.96	60%
4b-i	Construction of New culverts-Flexible pavement							
i	1 x 2 x 2.5	1.00	1.00	100%	-	-	1.00	100%
ii	1 x 2 x 2.5 (20 deg skew)	2.00	2.00	100%	-	-	2.00	100%
iii	1 x 2 x 2.5 (20 deg skew) - loop # 2	2.00	2.00	100%	-	-	2.00	100%
4b-ii	Construction of New culverts (replacement of old) -Flexible pavement							
i	2 x 3 x 2.5	1.00	1.00	100%	-	-	1.00	100%
ii	2 x 3 x 2.0	1.00	0.95	95%	0.00	0%	0.95	95%
iii	1 x 2 x 3 - loop # 2	1.00	1.00	100%	-	-	1.00	100%
iv	1 x 2 x 3 (15 deg skew) - loop # 2	1.00	1.00	100%	-	-	1.00	100%
v	1 x 2 x 2.5 - loop # 2	1.00	1.00	100%	-	-	1.00	100%
4b-iii	Construction of new culverts (replacement of old) rigid pavement 1 x 2 x 2.5 - loop # 2, 1 x 2 x 3 loop #2, Service ducts	1.00	1.00	100%	-	-	1.00	100%
5a	Drainage & erosion works (road side drain)							
i	Drain type D-1 covered (150 m)	1.00	0.33	33%	0.00	0%	0.33	33%
ii	Drain type D-1a uncovered (400 m)	1.00	1.00	100%	-	-	1.00	100%
iii	Drain type D-2 covered (225 m)	1.00	0.79	79%	0.00	0%	0.79	79%
iv	Drain type D-2a uncovered (200 m)	1.00	0.86	86%	0.00	0%	0.86	86%
v	Drain type D-4 (700 m)	2.00	1.23	62%	0.00	0%	1.23	62%
vi	Drain type D-3 (3511 m)	7.02	5.10	73%	0.05	1%	5.15	73%
5b	Road protection works : Metal guard rail (50m) , Barrier (200m)	1.00	0.75	75%	0.00	0%	0.75	75%
6	Ancillary works(traffic road signs, pavement marking / studs & km posts)	1.00	0.00	0%	0.00	0%	0.00	0%
7	Diversion	5.16	4.63	90%	0.00	0%	4.63	90%
TOTAL		**124.30**	**106.80**	**86%**	**1.41**	**1%**	**108.21**	**87%**

2.2 Section V (Km 21+100 - 22+400 & 24+000- 29+000)

Sr No.	Section V (Km 21+100 - 22+400 & 24+000- 29+000)	No of Milestones	Till Previous Month		Current Month		Total	
			No of Milestones Achieved	Percentage Completed	No of Milestones Achieved	Percentage Completed	No of Milestones Achieved	Percentage Completed
1	Earth work	12.600	12.40	98%	0.20	2%	12.60	100%
2	Sub base & base course							
a	Granular sub base	12.600	12.25	97%	0.35	3%	12.60	100%
b	Water bound macadam	10.472	9.15	87%	1.32	13%	10.47	100%
c	Asphaltic base course	10.472	9.15	87%	0.12	1%	9.27	89%
3	Surface courses and pavement							
a	Asphaltic concrete for wearing course & allied activities	10.472	9.15	87%	0.12	1%	9.15	87%
b	Rigid pavement (Half Pavement Width)	2.900	2.90	100%	-	-	2.90	100%
4a-i	Retaining wall (RW-2) Total L = 3375 m							
a	Retaining wall : H= 1.00 m ; L= 925m	3.083	3.08	100%	-	-	3.08	100%
b	Retaining wall : H= 2.5 m ; L= 350m	2.000	2.00	100%	-	-	2.00	100%
c	Retaining wall : H= 3.0 m ; L= 925m	3.083	2.70	88%	0.00	0%	2.70	88%
d	Retaining wall : H= 3.5 m ; L= 300m	2.000	1.04	52%	0.00	0%	1.04	52%
e	Retaining wall : H= 4.0 m ; L= 350m	2.000	2.00	100%	-	-	2.00	100%
f	Retaining wall : H= 4.5 m ; L= 50m	1.000	1.00	100%	-	-	1.00	100%
g	Retaining wall : H= 5.0 m ; L= 50m	1.000	1.00	100%	-	-	1.00	100%
h	Retaining wall: H= 6.0 m ; L= 325m	3.250	2.81	86%	0.00	0%	2.81	86%
i	Retaining wall: H= 7.0 m ; L= 100m	1.000	0.70	70%	0.00	0%	0.70	70%
j	Parapet walls : L = 925 m	5.000	3.00	60%	0.00	0%	3.00	60%
k	Retaining wall (PCC): H= 3.0 m; L= 400m	3.000	0.00	0%	0.00	0%	0.00	0%
4a-ii	Breast wall - 455m							
a	Breast wall (RW-3) H=2.0 m , L=55 m	1.000	1.00	100%	-	-	1.00	100%
b	Breast wall (RW-3) H=3.0 m , L= 400 m	2.000	1.73	87%	0.00	0%	1.73	87%
4b-i	Construction of New culverts-Flexible pavement							
i	1 x 2 x 2.5	1.000	1.00	100%	-	-	1.00	100%
ii	1 x 3 x 2.5	1.000	1.00	100%	-	-	1.00	100%
4b-ii	Construction of New culverts (replacement of old) -Flexible pavement							
i	1x 2 x 2.5 (20 deg skew)	3.000	2.85	95%	0.00	0%	2.85	95%
ii	1 x 3 x 2	2.000	2.00	100%	-	-	2.00	100%
iii	1 x 3 x 2.5	1.000	1.00	100%	-	-	1.00	100%
iv	3 x 3 x 4 (20 deg skew)	1.000	0.00	0%	0.00	0%	0.00	0%
v	2 x 3 x 3 (20 deg skew)	1.000	0.95	95%	0.00	0%	0.95	95%
vi	2 x 3 x 2.5 (45 deg skew)	1.000	1.00	100%	-	-	1.00	100%
vii	3 x 3 x 2.5 (20 deg skew)	1.000	1.00	100%	-	-	1.00	100%
viii	1 x 3 x 4 (25 deg skew)	1.000	1.00	100%	-	-	1.00	100%
ix	Service ducts (17 Nos)	17.000	17.00	100%	-	-	17.00	100%
4b-iii	Construction of causeways L = 234.00 m	1.000	0.50	50%	0.00	0%	0.50	50%
5a	Drainage & erosion works (road side drain)							
i	Drain type D-1 covered (800 m)	4.000	4.00	100%	-	-	4.00	100%
ii	Drain type D-1a uncovered (1600 m)	4.000	2.00	50%	0.00	0%	2.00	50%
iii	Drain type D-2 covered (1225 m)	3.063	1.00	33%	0.11	4%	1.11	36%
iv	Drain type D-2a uncovered (2240 m)	4.978	4.10	82%	0.88	18%	4.98	100%
v	Drain type D-4 (475 m)	1.000	0.63	63%	0.00	0%	0.63	63%
vi	Drain type D-3 (225 m)	1.000	0.67	67%	0.00	0%	0.67	67%
6	Ancillary works(traffic road signs, pavement marking / studs & km posts)							
i	Traffic signs / Km Posts	1.000	0.00	0%	0.00	0%	0.00	0%
ii	Pavement Markings / Studs	1.000	0.00	0%	0.00	0%	0.00	0%
7	Diversion	6.300	5.54	88%	0.00	0%	5.54	88%
TOTAL		**146.273**	**124.30**	**84%**	**3.10**	**2%**	**127.41**	**86%**

2.3 Section VI (Km 29+000 - 33+000)

Sr No	Section VI (Km 29+000 – 33+000)	No of Milestones	Till Previous Month		Current Month		Total	
			No of Milestones Achieved	Percentage Completed	No of Milestones Achieved	Percentage Completed	No of Milestones Achieved	Percentage Completed
1	Earth work	8.000	8.00	100%	-	-	8.00	100%
2	Sub base & base course							
a	Granular sub base	8.000	8.00	100%	-	-	8.00	100%
b	Water bound macadam	6.030	6.03	100%	-	-	6.03	100%
c	Asphaltic base course	6.030	6.03	100%	-	-	6.03	100%
d	Earthen dowel	1.000	0.50	50%	0.00	0%	0.50	50%
3	Surface courses and pavement							
a	Asphaltic concrete for wearing course & allied activities	6.030	6.03	100%	-	-	6.03	100%
b	Rigid pavement (Half Pavement Width)	2.880	2.88	100%	-	-	2.88	100%
4a	Retaining wall (RW-2) Total L = 1175 m							
a	Retaining wall : H= 2.5 m ; L= 275m	2.750	2.09	76%	0.00	0%	2.09	76%
b	Retaining wall : H= 3.0 m ; L= 450m	4.500	3.00	67%	0.31	7%	3.31	74%
c	Retaining wall : H= 3.5 m ; L= 100m	1.000	0.00	0%	0.00	0%	0.00	0%
d	Retaining wall : H= 4.0 m ; L= 100m	1.000	1.00	100%	-	-	1.00	100%
e	Retaining wall : H= 4.5 m ; L= 250m	2.500	2.50	100%	-	-	2.50	100%
4b-i	Construction of New culverts-Flexible pavement 1 x 2 x 3.5 (40 deg skew)	1.000	0.95	95%	0.00	0%	0.95	95%
4b-ii	Construction of New culverts (replacement of existing) -Flexible pavement							
i	1x 2 x 4.5 (20 deg skew)	1.000	1.00	100%	-	-	1.00	100%
ii	1 x 2 x 3 (25 deg skew)	1.000	1.00	100%	-	-	1.00	100%
iii	2 x 3 x 5 (25 deg skew)	1.000	1.00	100%	-	-	1.00	100%
4b-iii	Construction of New culverts on W&S road							
i	1 x 2 x 2 (14.70 m length)	2.000	0.00	0%	0.00	0%	0.00	0%
ii	1 x 2 x 2 (12.00 m length)	1.000	0.00	0%	0.00	0%	0.00	0%
iii	Service ducts	13.000	13.00	100%	-	-	13.00	100%
4c	Construction of causeways L = 265.00 m	1.000	0.40	40%	0.10	10%	0.50	50%
5a	Drainage & erosion works (road side drain)							
i	Drain type D-1 covered (625 m)	1.250	1.00	80%	0.00	0%	1.00	80%
ii	Drain type D-1a uncovered (2400 m)	4.800	4.80	100%	-	-	4.80	100%
iii	Drain type D-2 covered (450 m)	1.000	0.56	56%	0.16	16%	0.72	72%
iv	Drain type D-2a uncovered (1225 m)	2.450	2.45	100%	-	-	2.45	100%
v	Drain type D-4 (525 m)	1.000	0.23	23%	0.06	6%	0.29	29%
vi	Drain type D-3 (100 m)	1.000	0.00	0%	0.50	50%	0.50	50%
vii	Drain type D-3 (225 m) W&S Road	1.000	0.00	0%	0.00	0%	0.00	0%
5b	Road Protection works							
i	Stone Pitching (350 m) W&S Road	1.000	0.00	0%	0.00	0%	0.00	0%
ii	Gabion (300m)	1.000	0.00	0%	0.00	0%	0.00	0%
6	Ancillary works(traffic road signs, pavement marking / studs & km posts)							
i	Traffic signs / Km Posts	1.000	0.00	0%	0.00	0%	0.00	0%
ii	Pavement Markings / Studs	1.000	0.00	0%	0.00	0%	0.00	0%
7	Diversion	4.000	4.00	100%	-	-	4.00	100%
8a	Monuments & Weigh Station							
i	Weight Station (2Nos)	1.000	0.20	20%	0.05	5%	0.25	25%
ii	Monuments (01 Nos)	1.000	0.00	0%	0.20	20%	0.20	20%
8b	Relocation of Buildings							
i	Relocation of Boundary walls	1.000	0.77	77%	0.00	0%	0.77	77%
ii	Relocation of Buildings	1.000	0.66	66%	0.00	0%	0.66	66%
8c	Relocation of MES Water Supply line (Km 30+700 to 33+850)	1.000	1.00	100%	-	-	1.00	100%
TOTAL		**96.220**	**79.07**	**81%**	**1.38**	**1%**	**80.46**	**82%**

2.4 Bridge at Km 18+475

Sr No	Bridge at Km 18+475	No of Milestones	Till Previous Month		Current Month		Total	
			No of Milestones Achieved	Percentage Completed	No of Milestones Achieved	Percentage Completed	No of Milestones Achieved	Percentage Completed
1	Raft foundation , cut off wall, abut wall , abutment seal & wing wall							
a	Raft foundation , cut off wall	1.0	1.00	100%	-	-	1.00	100%
b	Granular sub base	1.0	1.00	100%	-	-	1.00	100%
2	Construction of Deck Slab	1.0	1.00	100%	-	-	1.00	100%
3	Dismantling, Structural Excavation, Backfilling , Drainage & Erosion , Rigid pavement & Ancillary works							
a	Dismantling,	1.0	1.00	100%	-	-	1.00	100%
b	Structural Excavation, Backfilling ,	1.0	1.00	100%	-	-	1.00	100%
c	Drainage & Erosion , Rigid pavement & Ancillary works	1.0	1.00	100%	-	-	1.00	100%
d	Ancillary works	1.0	0.00	0%	0.00	0%	0.00	0%
TOTAL		**7.0**	**6.00**	**99.6%**	**0.00**	**0%**	**6.00**	**99.6%**

2.5 Bridge at Km 27+000

Sr No	Bridge at Km 27+000	No of Milestones	Till Previous Month		Current Month		Total	
			No of Milestones Achieved	Percentage Completed	No of Milestones Achieved	Percentage Completed	No of Milestones Achieved	Percentage Completed
1	Construction of Piles	1.0	1.00	100%	-	-	1.00	100%
2	Pile caps , abutment walls, Pier Shaft , Wing walls & Transom							
a	Pile caps	1.0	1.00	100%	-	-	1.00	100%
b	Abutment walls, Pier Shaft , Wing walls & Transom	1.0	1.00	100%	-	-	1.00	100%
3	Casting & Launching of precast panels				-	-		
a	Construction of Pre-cast panels	1.0	1.00	100%	-	-	1.00	100%
b	Launching of Pre-cast Panels	1.0	1.00	100%	-	-	1.00	100%
4	Construction of Deck Slab	1.0	0.90	90%	0.04	4%	0.90	90%
5	Structural Excavation, Dismantling Backfilling , Earth work, surface course & pavement , drainage & Erosion & Ancillary works							
a	Excavate surplus common material , Dismantling of structures	1.0	0.15	15%	0.00	0%	0.15	15%
b	Surface course & pavement	1.0	0.00	0%	0.00	0%	0.00	0%
c	Structures excavation & back fill	1.0	1.00	100%	-	-	1.00	100%
d	Approach slabs	1.0	0.00	0%	1.00	100%	1.00	100%
e	Drainage & Erosion works	1.0	0.40	40%	0.10	10%	0.50	50%
f	Ancillary works	1.0	0.00	0%	0.00	0%	0.00	0%
TOTAL		**12.0**	**7.41**	**77%**	**1.14**	**3%**	**8.55**	**80%**

2.6 Bridge at Km 27+250

Sr No	Bridge at Km 27+250	No of Milestones	Till Previous Month		Current Month		Total	
			No of Milestones Achieved	Percentage Completed	No of Milestones Achieved	Percentage Completed	No of Milestones Achieved	Percentage Completed
1	Pile load test & Construction of Piles							
a	Pile load test	1.0	1.00	100%	-	-	1.00	100%
b	Construction of Piles	1.0	1.00	100%	-	-	1.00	100%
2	Pile caps , abutment walls, Pier Shaft , Wing walls & Transom							
a	Pile caps	1.0	1.00	100%	-	-	1.00	100%
b	Abutment walls, Pier Shaft , Wing walls & Transom	1.0	1.00	100%	-	-	1.00	100%
3	Casting & Launching of precast panels							
a	Construction of Pre-cast panels	1.0	1.00	100%	-	-	1.00	100%
b	Launching of Pre-cast Panels	1.0	1.00	100%	-	-	1.00	100%
4	Construction of Deck Slab	1.0	0.75	75%	0.02	2%	0.77	77%
5	Structural Excavation, Dismantling Backfilling , Earth work , surface course & pavement , drainage & Erosion & Ancillary works							
a	Excavate surplus common material, Dismantling of structures	1.0	0.25	25%	0.00	0%	0.25	25%
b	Surface course & pavement	1.0	0.00	0%	0.00	0%	0.00	0%
c	Structures excavation & back fill	1.0	1.00	100%	-	-	1.00	100%
d	Approach slabs	1.0	1.00	100%	-	-	1.00	100%
e	Drainage & Erosion works	1.0	0.50	50%	0.10	10%	0.50	50%
f	Ancillary works	1.0	0.00	0%	0.00	0%	0.00	0%
TOTAL		**13.0**	**9.50**	**87%**	**0.12**	**1%**	**9.62**	**88%**

2.7 Bridge at Km 2+200

Sr No.	Bridge at Km 2+200	No of Milestones	Till Previous Month		Current Month		Total	
			No of Milestones Achieved	Percentage Completed	No of Milestones Achieved	Percentage Completed	No of Milestones Achieved	Percentage Completed
1	Dismantling of Existing Expansion joint , concreting of new expansion joint & Installation of New Expansion joint							
a	Dismantling of Existing Expansion joint	1.0	0.00	0%	0.00	0%	0.00	0%
b	Concreting of new expansion joint	1.0	0.00	0%	0.00	0%	0.00	0%
c	Installation of New Expansion joint	1.0	0.00	0%	0.00	0%	0.00	0%
TOTAL		**3.0**	**0.00**	**0%**	**0.00**	**0%**	**0.00**	**0%**

2.8 Bridge at Km 11+560

Sr No	Bridge at Km 11+560	No of Milestones	Till Previous Month		Current Month		Total	
			No of Milestones Achieved	Percentage Accomplished	No of Milestones Achieved	Percentage Accomplished	No of Milestones Achieved	Percentage Accomplished
1	Dismantling of Existing Expansion joint , concreting of new expansion joint & Installation of New Expansion joint	1.0	0.66	66%	0.00	0%	0.66	66%
2	Construction of PCC Protection wall & Random Rubble masonry wall	1.0	0.00	0%	0.00	0%	0.00	0%
TOTAL		**2.0**	**0.66**	**24%**	**0.00**	**0%**	**0.66**	**24%**

2.9 Bridge at Km 21+320

Sr No	Bridge at Km 21+320	No of Milestones	Till Previous Month		Current Month		Total	
			No of Milestones Achieved	Percentage Completed	No of Milestones Achieved	Percentage Completed	No of Milestones Achieved	Percentage Completed
1	Roll Pointing	1.0	0.00	0%	0.00	0%	0.00	0%
2	Dismantling of existing railing , Construction of new steel railing as per dwg , poly urethane paint on existing steel girders	1.0	0.00	0%	0.00	0%	0.00	0%
3	Pressure grouting of existing abutments	1.0	0.00		0.00	0%	0.00	0%
4	Scarification of existing road pavement , surface course & pavement, drainage & erosion works , Ancillary works							
a	Scarification of existing road pavement	1.0	0.00	0%	0.00	0%	0.00	0%
b	surface course & pavement	1.0	0.00	0%	0.00	0%	0.00	0%
c	drainage & erosion works	1.0	0.00	0%	0.00	0%	0.00	0%
d	Ancillary works	1.0	0.00	0%	0.00	0%	0.00	0%
TOTAL		**7.0**	**0.00**	**0%**	**0.00**	**0%**	**0.00**	**0%**

2.10 Forecasted Completion PIL 05

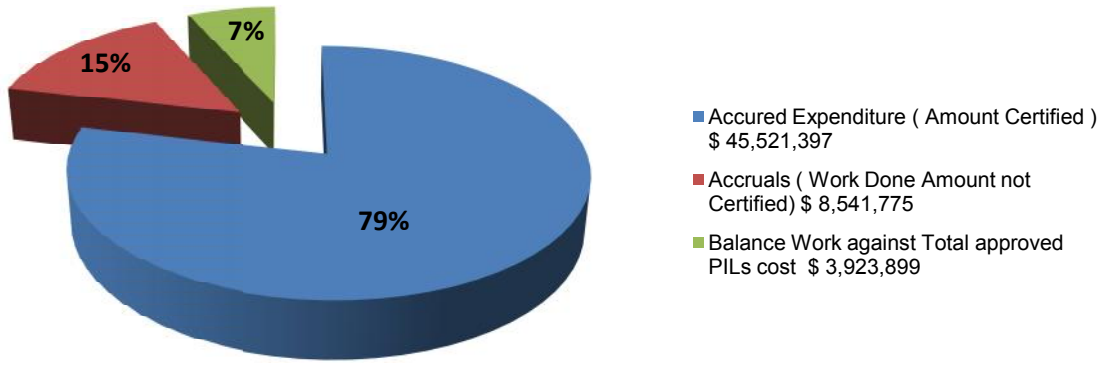
*The following table shows the forecasted completion of in progress activities.

	Remaining Works	Year 2015					
		Jul	Aug	Sep	Oct	Nov	Dec
PIL 05	Section -IV (19+000 to Km 21+100 & 22+400 to 24+000 & Loop # 02)						
	Section -V (Km 21+100 - 22+400 and 24+000 - 29+000)						
	Section -VI (Km 29+000- 33+000)						
	Construction of Bridge at Km 18+475						
	Construction of Bridge at Km 27+000						
	Construction of Bridge at Km 27+250						
	Rehabilitation works at Bridge at Km 2 + 200						
	Rehabilitation works at Bridge at Km 11 + 560						
	Rehabilitation works at Bridge at Km 21+320						

***Note:** FWO has not provided the construction schedule; the above table is based on assumptions keeping the current progress, weather condition and construction sequence of sub activities.

3. FINANCIAL PROGRESS (BUDGET / ACCRUED / ACCRUALS)

The following pie chart shows the percentage of accrued and accruals expenditure against approved PILs Cost (US$ 57,987,073).



Details of Accruals and Accrued Expenditure

Sr No	PIL	Sub - Projects		Sub-Project Cost	PIL Cost	Till Previous Month		Current Month		Total		Balance
		Road	Bridges			Accrued Expenditure	Accruals	Accrued Expenditure	Accruals	Accrued Expenditure	Accruals	
1	PIL 01	Sec 01	-	$9,978,081	$9,978,082	$9,978,082	-	-	-	$9,978,082	-	-
2	PIL 02	Sec 02	-	$9,383,483	$9,383,484	$9,383,483	-	-	-	$9,383,484	-	-
3	PIL 03	Sec 03	-	$9,512,705	$9,512,705	$9,512,705	-	-	-	$9,512,705	-	-
4	PIL 04	-	at Km 9+560	$1,225,965	$3,668,533	$1,225,965	-	-	-	$1,225,965	-	-
		-	at Km 23+750	$1,392,302		$1,392,302	-	-	-	$1,392,302	-	-
		-	at Km 11+190	$604,551		$604,551	-	-	-	$604,551	-	-
		-	at Km 22+925	$445,715		$445,715	-	-	-	$445,715	-	-
5	PIL 05	Sec 04	-	$7,663,172	$25,444,269	-	$6,617,615	$3,857,946	$109,308	$3,857,946	$2,868,977	$936,249
		Sec 05	-	$8,580,296		-	$7,175,046	$4,364,924	$148,538	$4,364,924	$2,958,660	$1,256,712
		Sec 06	-	$6,551,308		-	$5,301,488	$3,520,173	$89,337	$3,520,173	$1,870,653	$1,160,482
		-	at Km 18+475	$218,068		-	$217,117	$184,034	-	$184,034	$33,083	$951
		-	at Km 27+000	$1,111,838		-	$858,044	$311,768	$36,881	$311,768	$583,157	$216,913
		-	at Km 27+250	$1,073,617		-	$932,085	$739,750	$10,108	$739,750	$202,443	$131,424
		-	at Km 2+200	$68,944		-	-	-	-	-	-	$68,944
		-	at Km 11+560	$105,296		-	$24,802	-	-	-	$24,802	$80,494
		-	at Km 21+320	$71,730		-	-	-	-	-	-	$71,730
Total				**$57,987,073**		**$32,542,802**	**$21,126,197**	**$12,978,595**	**$394,173**	**$45,521,397**	**$8,541,775**	**$3,923,899**

4. M&E ACTIVITIES DURING THE REPORTING PERIOD

4.1 Field Inspections

During the reporting month, the following frequency of field inspections by AGES technical staff was carried out:

- Project Manager = 04
- Quality Assurance Manager = 05
- M & E Specialist = 07
- Field Managers = 12
- Environmental compliance officer = 03
- Field Monitors = 23
- Laboratory Staff = 18

4.2 Construction Activities Monitored

Sr	Activity	Unit	During the reporting Month						Completed till Previous Month	Completed in reporting month	Total Completed
			Sec IV	Sec V	Sec VI	Sec VII	Sec VIII	Sec IX			
1	Asphaltic Concrete Wearing Course	Km	0.675	0.061	-	0.875	-	-	26.10	1.61	27.71
2	Asphaltic Concrete Base Course	Km	0.275	0.061	-	0.975	-	-	27.77	1.31	29.08
3	Water Bound Macadam	Km	0.225	0.661	-	0.35	-	-	27.82	1.24	29.06
4	Rigid Pavement	Km	-	-	-	-	0.5	0.937	12.68	1.44	14.11
5	Granular Sub base	Km	-	0.175	-	0.3	0.787	0.312	43.12	1.58	44.70
6	Earth Work	Km	-	0.1	-	0.175	0.675	0.25	43.66	1.20	44.86
7	Culverts	Nos	-	-	-	-	-	2	108.00	2.00	110.00
8	Retaining Walls	Km	0.044	0.008	0.013	0.025	-	-	14.21	0.09	14.30
9	Breast Wall	Km	-	-	-	-	-	-	1.15	0.00	1.15
10	Drains	Km	0.047	0.383	0.3	-	-	-	34.88	0.73	35.61
11	Utility Ducts	Nos	-	-	-	-	-	-	79.00	0.00	79.00
12	Link Roads	Km	-	-	-	-	-	-	0.90	0.00	0.90
13	Cause ways	Nos	-	-	1	-	-	-	7.00	1.00	8.00
14	Metal Guard Rail	Km	-	-	-	-	-	-	2.73	0.00	2.73
15	Diversion	Km	-	-	-	-	-	0.2	40.32	0.20	40.52

4.3 Field Observations & Follow up

Sr. No	Findings	Follow up	Status
1	Drains type D-3 and parapet walls, constructed with deficient concrete.	AGES QAM intimated FWO/ Nespak CRE via email 15-April 2015	Joint core samples are yet to be taken for testing
2	At Km 37+000 onwards heavy dust observed due to construction, creating severe environmental hazard.	AGES QAM intimated FWO/ Nespak CRE via email 15-April 2015 & 22- May 2015; discussed at Meeting 04 June 2015.	Rectification in progress
3	At Km 24+525 it was observed that the level/slope of drain not as per drawing.	AGES QAM intimated FWO/ Nespak CRE via email 23-April 2015	No action taken by FWO/Nespak till end of the reporting month.
4	At Km 25+400 a localized pavement distress was observed in the asphalt wearing course.	AGES QAM intimated FWO/ Nespak CRE via email 30-April 2015	No action taken by FWO/Nespak till end of the reporting month.
5	Substandard Stone Masonry works in Retaining and Breast Walls	AGES QAM intimated FWO/ Nespak CRE via email 20 -May 2015, AGES PM informed USAID COR 24 June 2015 & 1 July 2015. A coordination meeting 7 July 2015. PM email USAID 27 July 2015	Rectification in progress
6	Settlement in Flexible Pavement at KMs 09+560 (Bridge No. 2) & KM 21+320 (Near Filtration Plant).	AGES QAM intimated FWO/ Nespak CRE via email 22 -May 2015 & AGES PM informed USAID COR via email on 08 June 2015.	No action taken by FWO/Nespak till end of the reporting month.
7	Substandard workmanship at Baghiari check post	AGES QAM intimated FWO/ Nespak CRE via email 28 -May 2015	Rectification in progress
8	Improper backfilling at newly constructed retaining walls, breast walls, culverts, RCC Drains	AGES QAM intimated FWO/ Nespak CRE via email 28 -May 2015 AGES PM informed COR USAID via email 17 June 2015	Rectification in progress
9	FWO claims borrow however Suitable / local excavated material used for embankment / backfilling in sec 08 & 09	AGES PM intimated USAID COR via email 15- June 2015	Matter resolved 50% accepted.
10	Rutting / Settlement observed at KM 14+850 - KM 14+925 & KM 15+925 - KM 16+125	AGES PM intimated USAID COR via email 15- July 2015	KM 14+850, Cold Milling of a 165 meters stretch, where channeling, was observed, was carried out on 25/26 July, 2015. 6 Cm layer of Wearing Course was removed. Later a fresh layer of ACWC was laid. KM 15+925 Cold Milling of effected portion, 325 Ms stretch, was in progress.
11	KM 35+149 (Box Culvert # 2), Damages & scouring of newly constructed Retaining walls on the downstream side of the Box Culvert.	AGES PM intimated USAID via email 27 July 2015	No action taken by FWO/Nespak till end of the reporting month.

Sr. No	Findings	Follow up	Status
12	KM 10+500 (Baghiari Check Post) Cracks observed on both inner & outer sides of the barrack walls located on the LHS of PTR; on the back side of the building, scouring below the Plinth protection observed ; culvert located on RHS near the gate has been choked due to storm water debris/sliding material, requires removal/cleaning.	AGES PM intimated USAID via email 30 July 2015	No action taken by FWO/Nespak till end of the reporting month.
13	KM 33+758 (Box Culvert) RCC Wing Wall Overturned from the Top, damaging the Flexible pavement. Erosion of newly constructed Retaining Wall (Downstream side/ LHS PTR), due to storm water.	AGES PM intimated USAID via email 30 July 2015	No action taken by FWO/Nespak till end of the reporting month.

4.4 Meetings

Conducted follow-up /coordination meetings with USAID, FWO / NESPAK reps.

Date	Participants	Venue
07, July 2015	USAID, AGES, FWO, NESPAK	FWO Office, Jamrud, Khyber Agency
28, July 2015	USAID, AGES, FWO, NESPAK	FWO Office, Jamrud, Khyber Agency
31, July 2015	USAID, AGES, FWO, NESPAK	FWO Office, Jamrud, Khyber Agency

Minutes of Meeting is attached as Annex–II.

4.5 Laboratory Tests

The following table shows the frequency of laboratory tests conducted during the reporting month.

Sr. No.	Test	No of Tests conducted								
		Independent			Jointly			Total		
		Total	Fail	Pass	Total	Fail	Pass	Tests	Fail	Pass
1	Asphaltic concrete wearing course quality test	23	2	21	-	-	-	23	2	21
2	Asphaltic concrete wearing course compaction test	-	-	-	8	-	8	8	-	8
3	Asphaltic concrete wearing course cores thickness test	-	-	-	8	-	8	8	-	8
4	Tack coat test	-	-	-	-	-	-	-	-	-
5	Asphaltic concrete base course quality test	28	-	28	-	-	-	28	-	28
6	Asphaltic concrete base course cores compaction test	-	-	-	60	-	60	60	-	60
7	Asphaltic concrete base course cores thickens test	-	-	-	60	-	60	60	-	60
8	Prime coat test	-	-	-	-	-	-	-	-	-
9	Aggregate Base course material quality test	6	1	5	-	-	-	6	1	5
10	Aggregate Base course field density test (FDT)	-	-	-	7	4	3	7	4	3
11	Sub base material quality test	3	-	3	-	-	-	3	-	3
12	Sub base material field density test (FDT)	-	-	-	11	-	11	11	-	11
13	Sub grade material quality test	-	-	-	-	-	-	-	-	-
14	Sub grade material field density test (FDT)	-	-	-	-	-	-	-	-	-
15	Aggregate quality test for concrete	-	-	-	-	-	-	-	-	-
16	Concrete compressive strength test	10	-	10	-	-	-	10	-	10
17	Absorption & Compression strength of Bricks	8	6	2	-	-	-	8	6	2
18	Stone Masonry quality test	-	-	-	-	-	-	-	-	-
19	Calibration of Lab Equipments	-	-	-	-	-	-	-	-	-
Total		**78**	**9**	**69**	**154**	**4**	**150**	**232**	**13**	**219**

5. ENVIRONMENTAL COMPLIANCE

The Environmental Monitoring Report is attached as **Annex-I.**

ANNEXURE-I
ENVIRONMENTAL MONITORING REPORT

Environmental Monitoring Report

Environmental Compliance Officer: Shabir Ahmad Khan

Road Section Under Construction

Section – I (0+000 to km; 9+000)

Section – II (km: 9+000 to 14+000)

Section – III (km: 14+000 to 19+000 & Loop-I)

Section – IV (km: 19+000 to 21+100, km: 22+400 to km; 24+000 & Loop-II)

Section – V (km; 21+100 to km: 22+400 & km: 24+000 to 29+000)

Section – VI (km: 29+000 to 33+00)

Section – VII (km: 33+000 to km: 37+000)

Section – VIII (km: 37+000 to km: 41+000)

Section – IX (km: 41+000 to km: 43+465 & Loop-III)

PERSONS CONSULTED AT SITE

1. Mr. Zashan Khan, Site Supervisor, FWO
2. Mr. Shahid Zaman, Site Sub- Engineer, FWO
3. Mr. Azam Khan, Surveyor, FWO
4. Mr. Mohammad Aizaz, HSE Inspector, FWO

Work Status

- Work in progress [√]
- Work Stopped [ ]
- Work Completed [ ]

Quality Of Environment Compliance

- Good [ ]
- Satisfactory [√]
- Not Satisfactory [ ]

Issues at Site

- Dust pollution at Km 26+000 – 27+000 by pass road & Km 37+000 onward.
- Road blockage is common at different places due to road construction or traffic control mismanagement.
- Installation of traffic sign boards with reflecting material, speed breakers, etc. were found missing, especially at diversions.
- While working at sites workers are without using PPE's (Personal protective equipments).
- Health & Safety arrangements, such as first aid boxes and ambulance services are available at FWO Camp, and are provided to the workers when needed at site.
- Excavated material dumped at site needs proper placement / backfilling.

Environmental Monitoring Check List for the Site

S. #	Activity	Mitigation Measures	Monitoring indicators	Field Observations
		Construction Phase		
1	**Use of heavy equipment**	a. Set protocols for vehicle Maintenance. b. Check fuel level, deliveries, and use. c. Check pipes and joints for leaks. d. Tight & check generators cables and fuel lines. e. Prevent overfilling of main storage and vehicles tanks. f. Avoid parking of heavy equipments under trees to prevent soil compaction and damage to the roots of the trees.	Soil contaminations, stability and erosion	During the site visits, it was observed that heavy and light machinery was properly maintained and parked at FWO camp.
2	**Flood protection**	a. Culvert construction to control flood damages and provide safety to embankments. b. Take measures to protect road along the river side. c. Construction of retaining walls. d. Provide new causeways for a smooth flow to flood water during rainy seasons.	Road protection and Safety	Safety measures, such as side drains, culverts and retaining wall construction in sections VI, VII &VIII are in progress to protect the road from flood water and provide a smooth flow to wastewater disposal.
3	**Handling and transportation of hazardous waste**	a. Prevent dumping of hazardous materials near villages and water bodies. b. Burn waste oil, which is not reusable. c. Recyclable material should not contain heavy metals that are inflammable, investigate and use less toxic alternative products. d. Prohibit use of waste oil for cooking purposes.	Soil Contamination and Safety	During site visits, no hazardous material was found along the road site; therefore, no action as such is further required.
4	**Handling of solid Waste**	a. Site manager should feel responsible for collection and disposal of solid waste. b. Provide Training to the site personnel in waste management and its handling procedures. c. Separation of chemical waste for special handling. d. Record the amount of waste, generated recycled & reused e. Proper storage and well managed site practices will minimize the damage to potentially contaminate construction materials. f. Store general refuse in enclosed bins to control its further mixing with construction materials. g. Engage a reputable waste collection firm for waste collection and removal of	Toxicity, Soil Contamination and Pollution	During site visits, FWO staff was strictly suggested to comply with the solid waste management protocols to prevent the contamination of construction materials. So far the arrangements, to handle the construction materials at main storage were satisfactory.

S. #	Activity	Mitigation Measures	Monitoring indicators	Field Observations
		general refuse at the site.		
5	**Construction crews, camps & Accommodation**	a. Check quality & maintenance of accommodation for site crew. b. Avoid cutting of vegetation as much as possible. c. Provide sanitation, such as pit latrines to the site crew on temporary basis. d. Use of local labor. e. Screening test for potentially affected HIV and tuberculosis viruses' site crews. f. Provide education and enforced guidelines to local inhabitants. g. Set guidelines to prohibit poaching and plants collection. h. Provide an adequate and good quality of food to the work force. i. Drinking water should meet WHO standards, and clearly demarcated from water for construction purposes. j. Prohibit domestic pets / livestock to enter into the site.	Ground water pollution and conflicts with locals.	During site visits, it was found that the FWO camp was renovated and properly maintained in order to provide basic facilities to the construction crew, such as washrooms, kitchen, TV lounge, café shop, dining hall etc. The quality of food provided to the FWO labor force was good and found sufficiently enough. Other facilities, such as health hygiene were also found satisfactory.
6	**Material handling, use, and storage**	a. Securing of construction materials will ensure a safe passage between destinations for the transport system. Loaded vehicles shall be properly covered to prevent spillage, and contractor should be held responsible to clear them off. b. Transfer and deposit construction materials directly to the site for use. Avoid stockpiles to create less visual impacts. Leftover of any foreign materials on the site should clearly be off, and the project area should also be properly reinstated, affected by any construction activity. c. Avoid spray of any bitumen products on vegetation outside the road area. d. Avoid concrete mixing on ground. e. Use of wet gravel at site. f. Avoid direct fall of drainage water into sensitive areas. g. Control all runoff from batching plants so that cement do not contaminate water, and if any, it should be collected, stored and disposed of at a designated site. h. Collect and deliver empty cement bags to recycling plants. i. Storage of contaminated	Dust pollution	The FWO labor force was suggested to provide safe passages to dumpers for carrying construction materials from main storage to work places. Further suggested that the construction material should be properly loaded and secured to prevent the material spillage and minimize the stockpiles visual impacts. The compliance about the proper placement and handling of building materials was not satisfactory, especially during retaining walls and culvert construction.

S. #	Activity	Mitigation Measures	Monitoring indicators	Field Observations
		water should not allow to over flow, and will be protected from rain water.		
7	**Materials extraction, Quarrying & logging**	a. Identify environment friendly materials within budget. b. Use materials from local road cuts first, only if it produces an aggregate of materials for stabilizing surfaces and filling embankments. c. Project area should be properly restored and treated with erosion control measures once materials removed at site. d. Develop logging, quarrying and borrowing plans, and also take into account its accumulative effects. e. Take photos at site before the start of excavation, so that restoration can match the original site as much as possible. Also make sure that site quarries and gravel pits are invisible to travelers on road. f. Adhere and monitor the plans to minimize side impacts due to extraction activities. Try to modify the plans as much as required. g. Restore and sustain the site area once the extraction activity is over. h. Install drainage structures to direct the water away from pits. i. Implement safety protocols to minimize the risks occurring due to collapse of quarry walls, rocks falling, debris, or any other accidental falls from clefts. j. Discuss the use of retaining walls pits and water ponds with local community as an option used for crops, grazing of cattle, or similar use.	Change in landscape & Creation of water ponds.	FWO management was advised for proper maintenance of the quarry area as well as the restoration of the original site, once the borrowing activities accomplished.
8	**Site clearing & leveling**	a. Minimize disturbance to local flora during construction activities as much as possible. b. Minimize the amount of clearance of small areas for active work once at a time. c. Avoid use of herbicides. Any such use should follow health and safety procedures to protect people and the environment. d. Limit for herbicides use should specified by the manufacturers. e. Clear the project area without	Loss of vegetation, soil erosion, stability, water pollution, health of workers and local community.	During the site visits, no impact on vegetation was found as most of the project area is rugged, and of hilly nature. No use of herbicides was found as most of the project area is barren and devoid of the greenery and plantation. Appropriate measures were taken for the conservation of soil.

S. #	Activity	Mitigation Measures	Monitoring indicators	Field Observations
		destroying plants and turfs, and take measures to preserve and replant where ever is possible. f. Remove Vegetation during dry periods only, and preserve soil top surface if required re spreading. While if it is removed during wet periods, don't disturb soil just before the actual start of construction. g. Use of erosion control measures such as hay bales. h. Replant and re –vegetate the local flora on immediate basis once removed the equipment from site.		
9	**Excavation, cutting and filling**	a. Cover Piles with plastic sheets, prevent run off with hay bales, or use similar measures. b. Fencing around excavation activities. c. Investigate shallow over excavation and alternatives. d. Construction crews and supervisors must aware of the historic burials, socio-cultural and religious objects. And, if recovered should properly be guarded to avoid any destruction. e. Ensure that excavation is accompanied by a well-engineered drainage system. f. Don't fill the flow line of a watershed. In arid areas, even the occasional rains may create a strong flow of water in channels. g. Adopt best engineering practices, for example, don't use the soil alone, first lay a bed of rock and then gravel it. h. Balance cuts and fills, wherever is possible to minimize the earth work movement. i. Water sprinkling to avoid dust solution on road temporarily used for traffic.	Soil erosion, stability and surface water contamination	Excavation, cutting & filling for the road widening, culverts and retaining walls construction in section VIII is in progress. While the protocols compliance about the Health & safety and environmental issues are generally missing or insufficient. During site visits, it was also recommended to the subcontractors to properly cover and fence all the culverts construction at work places. A proper drainage system for the smooth flow of water fall during excavations is also needed at site. Sprinkling of water is also needed to avoid dust pollution on diversions.
10	**Traffic Control and management**	a. Need for practical efforts in order to control and accommodate traffic along the road as far as much as possible. b. Provide sign boards in order to give directions, and guide drivers about diversions. c. Provide proper traffic management training to the contractor staff at the site before the construction	Health and Safety of workers &local population	<u>Traffic flows with diversions along the existing road.</u> Despite the arrangements for diversions, proper traffic signboards for traffic control management are missing at site. Therefore, FWO contractors are strongly suggested: - Install temporary traffic sign boards

S. #	Activity	Mitigation Measures	Monitoring indicators	Field Observations
		activities take place. d. Avoid as much as possible temporary by passes during land clearing at site. e. Maximum speed limit at project site for heavy machinery should not exceed 20Km/hr. f. Try to keep the road partly closed to provide all time maximum safe passage to the vehicles/pedestrians g. Try to conduct work when traffic volume is low h. Organize a proper schedule in order to deliver sand trucks at the time of less traffic.		with reflective materials to maximize drivers' visibility at night. Construction of speed breakers to specify maximum speed limit for heavy machinery at site. The maximum speed limit should not exceed 20Km/hr.
11	**Blasting**	a. Allow minimum blasting as much as possible at site. b. Take Safety measures to provide protection to workers and locals from injuries due to falling of rocks and avalanches. c. Provide protective equipments to the workforce on individual basis.	Noise pollution and occupational safety	Currently, rock excavation for road widening in sections VIII & IX is in progress. The protocols compliance of the labor safety during excavations activities is generally missing at site. Therefore, FWO is advised to provide PPEs (personal protective equipments) to workers to ensure labor safety at site.
12	**Sources of building materials**	a. Develop logging, quarrying and borrowing plans to provide cumulative effects of environmental compliance at site. b. Adherence to plans and monitoring over impacts of extraction activities at site. Try to modify these plans as much as required. c. Fill in quarries and pits before the abandoning of the construction activity. d. Control runoff into pits.	Damages to the aquatic, terrestrial ecosystems erosion , siltation, and vector-borne diseases	The environmental compliance about the quarry areas is not satisfactory at few places. Therefore, FWO is strictly advised to fill the quarries and pits once the borrowing activities accomplished.
13	**Dust Pollution**	a. Water spraying. b. Covering of Trucks with tarpaulins.	Nuisance to the public, undermining the quality of air and water due to contamination	Problem of dust pollution has been observed at KM 26 to 27 by pass road and Km 37 and onward. There was some places having dust pollution, owing to heavy commercial traffic along the corridor and nature of soil. Mitigation measures in this aspect are not appropriate. In this respect, special attention is required to control this issue, because the dust pollution impacts directly on human health.
14	**Borrow Areas**	These impacts of borrow areas can be reversed if a diligent restoration process is placed by the contractor as well as approved by the Highway Division.	Rugged landscape, its interference with the local aesthetics; posing of danger to livestock and local community children; holding of stagnant water and taking up of	The activities concerning borrow areas were mostly seen along the non perennial flooded stream beds, where the restoration is generally made naturally after rain. However, where the

S. #	Activity	Mitigation Measures	Monitoring indicators	Field Observations
			agricultural land.	restoration like land leveling etc is required, that has not been implemented at some places.
15	**Damages to the existing infrastructure**	a. Locate different locations of existing infrastructure on both sides of road. b. Avoid damages to locations of water pipes and electricity pylons etc.	Facilities to the locals	Since project commencement, FWO demonstrated utmost care of the overhead and underground infrastructure facilities and avoided damages to water pipes and electricity pylons etc. especially during culvert construction. It was also suggested to the workers to inform FWO/ NESPAK / WAPDA/PTCL departments before the excavation activities started at site.
16	**Health & Safety of the workers**	a. Prepare and implement a Health and Safety Plan at site. b. Exclude public from site area. c. Ensure that workers use Personal Protective Equipments. d. Provide Health & Safety Training (including HIV/AIDS transmission process) to all personnel; e. Follow documented procedures for all activities at site; f. Keep reports and records of accidents.	Workers and public at risk due to accidents at site	During the site visit, it was observed that the compliance about the Health and Safety protocols was generally followed at camp, while neglected at work site. In this regard, FWO officials were advised to observe the protocols compliance concerning the labor safety, preparing of H&S plan and keeping records about accidents, illness and treatments of workers etc. Moreover, training of H&S protocols compliance to the workers is also very important to ensure labor safety and good health at site. Also, health facilities, such as ambulance services, first aid etc. are available at FWO camp and provided to the workers at site when needed. PPEs (Personal protective equipments) for the safety of labor were missing at project site. The AGES team obtained the incidence reports, but in the report the compensation package was not mentioned and advised them to provide. Social/resettlement records were also obtained.
17	**Local Employment**	Contractor should hire at least 50% of local workforce at project site.	Economic benefits to the local people	Majority of the FWO workforce are regular employees. Local labor is also hired when needed at site, especially with sub contractors.
18	**Others concerns like Resettlement etc.**	a. Resettlement, if any. b. Provide pedestrians and road access to local people. c. Avoid social disturbances over Infrastructure damages, such as telephone cables, sewerage, water supply schemes etc. d. Avoid Social Conflicts with	Resettlement & Social management	Due to the road construction on the existing corridor, there are some minor resettlement issues in the project area. These issues were resolved in peaceful manner, providing the same construction at other places. During the last visit, FWO was advised to provide

S. #	Activity	Mitigation Measures	Monitoring indicators	Field Observations
		locals.		the detail of all the relocated structures. The infrastructure facilities, such as water supply lines, telephone cables and electricity lines etc. are identified and relocated. During site visits, few social conflicts with locals were noticed in the whole period, but resolved properly.

ENVIRONMENTAL MONITORING

At Km 20+600 (Loop 2 end) Excavated dumped material being removed from the stream for smooth flow of stream.

Dust Pollution at Km 35+500 needs water sprinkling.

Water Sprinkled at Km 40+800 to control dust pollution

KM 37+500, construction work is in progress, needs labor safety and compliance of H&S measures.

At km 39+800 Excavated material placement along the road slope, require the protection of vegetation and proper leveling.

Km 34+700, FWO crush Plant emphases the dust pollution, require safety measures for workers and surroundings.

ANNEXURE-II
MINUTES OF MEETING

MINUTES OF MEETING HELD ON JULY 7, 2015 IN 121 Q&C BN ENGRS (FWO), AT JAMRUD FORT

PARTICIPANTS

USAID

1. Mr Muhammad Anwar Afridi - COR USAID
2. Mr Jalil Ur Rehman - PM USAID

FATA Secretariat

1. Mr Muhammad Ali - PD FATA Secretariat

FWO

1. Lt Col (R) Imitiaz Hussain - HQ FWO
2. Mr Muhammad Iqbal - GM HQ FWO
3. Lt Col Muhammad Nadeem Afzal - PM
4. Maj Muhammad Ajmal - PO

AGES

1. Mr Naseer Muhammad Khan - PM
2. Mr Fakhr uz Zaman - QAM (Roads)
3. Lt Col (R) Zafar Alam Khan - M&E Specialist

NESPAK

1. Mr Abdullah Jan Babar - CRE
2. Mr Muhammad Naeem - RE
3. Mr Muhammad Arif - CME
4. Mr Zia Ullah Niazi - ME

The following were discussed:-

S. #	Point Discussed	Action By
1	**Poor Quality of Stone Masonry Works** **a. Description** AGES raised the issue of poor quality of stone masonry work in general. FWO HQ concurred on the issue raised by AGES. Further assurance was given to all the stakeholders that the quality of the work would be improved. Following were some of the locations where the quality of work was substandard: Km19+875, Km35+149, Km38+240 , Km 38+775, Km38+975, Km38+150, Km 39+250 Abutment wall & center pier of culvert at RD 02+529 (Loop-3) **b. Recommendations** • All the substandard work done would be dismantled. NESPAK • informed that action had already been taken in case of RD 19+875 and RD 35+149. • All retaining walls would be constructed in strict compliance with NHA specifications. • COR/PM USAID informed the house that substandard work(s) would not be certified for payment.	FWO/NESPAK/ AGES
2	**Back fill at Culvert** **a. Description** Backfill of the retaining wall was done in lifts of 1~2m at RD38+140 and RD38+340. **b. Recommendation** NESPAK informed that backfilling in thick layers was a temporary arrangement and done mainly to create a working space for machinery/equipment. The loose backfill would be removed and back filled properly according to the NHA specifications.	FWO/NESPAK
3	**Cascade for Culvert** **a. Description** Regarding the provision of cascade for the culvert(s) in Loop #3 (RD 0+840), FWO informed that the same (cascade) had been provided in the design. AGES expressed its concern over the design of the proposed cascade as this was not site specific. **b. Recommendation** Design of cascade be reviewed as per the site requirement and discussed with all the stakeholders.	FWO/NESPAK
4	**Sub Base Material screening** **a. Description** The sub base material on the site was not screened. **b. Recommendation** FWO/ NESPAK would ensure screening of sub base material prior to lying on the site.	FWO/NESPAK

S. #	Point Discussed	Action By
5	**Field Density Tests** **a. Description** Failed results of field density tests. **b. Recommendation** NESPAK explained that such results were not required to be raised in emails as they were simply daily routine tests.	
6	**Crusher / Quarry** **a. Description** AGES has had concern about the quality of material taken from the quarry/crusher at RD 33+650. **b. Recommendation** NESPAK gave a brief history of the quarry site and installation of crusher at RD 33+650, for the satisfaction of the participants. Material Specialist HQ NESPAK (Mr. Muhammad Arif) would officially communicate with the stakeholders about the suitability of the quarry site for construction purposes.	FWO/NESPAK
7	**Mortar** **a. Description** Dropping of mortar without a chute as observed by AGES. **b. Recommendation** Proper chute for the supply of mortar would be provided where the height was 2 meters or more.	FWO/ NESPAK
8	**AC WC Core Thickness** **a. Description** Core thickness of ACWC: AGES did not agree to re-coring of deficient thickness of ACWC cores nor to consider the compaction cores for thickness check. **b. Recommendation** NESPAK requested for re-coring of full depth or compaction cores to be considered for thickness as the deficient thickness cores might be of local spots. The issue to be resolved in line with the specification(s) guideline.	NESPAK/AGES
9	**Concrete Coring** **a. Description** Joint coring of D-3 drain in Section IV and VI. **b. Recommendation** The joint coring would be carried out to ascertain the concrete strength (Class B) and minimum thickness of the respective concrete layers.	FWO/NESPAK/ AGES

S. #	Point Discussed	Action By
10	**Lab & Field Testing Results** **a. Description** Lab and field testing results. **b. Recommendation** All the relevant field and Lab testing results would be provided to AGES under a covering letter of CRE. Also a summary of these test results would be attached with all the IPCs in future. FWO/NESPAK should ensure to timely provide AGES the test results data required for the certification of the IPCs.	FWO/NESPAK
11	**Temperature of Concrete** **a. Description** High Temperature of concrete **b. Recommendation** One of the chillers, which was out of order would be fixed so that the proper temperature of the concrete should be maintained.	FWO/ NESPAK
12	**Poor Lighting Arrangement** **a. Description** Poor lighting arrangement during work at night. **b. Recommendation** Locations where lighting arrangements were not adequate, arrangements would be improved.	FWO/ NESPAK
13	**Environmental Issue** **a. Description** Dust Control **b. Recommendation** Regular sprinkling of water would be done in reaches, where the ground was not slippery so that the local residents were protected from dust pollution.	FWO/NESPAK
14	**PIL** **a. Description** Finalizing meeting. **b. Recommendation** A meeting would be held at the FWO"s office on July 10, 2015, to finalize a draft PIL for section VII and VIII.	All Stakeholders
15	**Fortnightly Meetings** **a. Description** HQ FWO and USAID emphasized on holding fortnightly progress meeting. **b. Recommendation** The fortnightly meeting should be held on 4th and 20th of each month. Whereas its minutes would be sent by not later than 6th and 22th respectively to all the stakeholders. The date and time would be confirmed before the scheduled meeting.	All Stakeholders

The meeting ended with a word of thanks by CO 121 Q&C BN (FWO) and COR/PM USAID.

ANNEXURE-III
PHOTOGRAPHS

PAVEMENTS

KM 19+750~20+400 FW; ACWC laying & compaction in progress

KM 20+475~20+740 FW; ACBC 1st layer laying & compaction in progress

KM 33+900~34+400 HW RHS; ACWC compaction in progress

KM 35+250~35+575 FW; ACBC 2nd layer laying & compaction in progress

KM 35+700~36+000 HW RHS; ACBC 2nd layer final compaction in progress

KM 36+000~36+275 HW RHS; ACBC 2nd layer laying & compaction in progress.

KM 1+400~1+450 HW LHS LOOP-III; Rigid pavement concrete placing in progress

KM 37+450~37+500 HW LHS; Rigid pavement concrete placing in progress (2)

KM 1+975~2+000 HW RHS LOOP-III; Rigid pavement formwork fixing in progress

KM 37+450~37+500 HW LHS; Rigid pavement concrete placing in progress.

KM 37+868.8~37+891.6 HW RHS; Rigid pavement concrete placing in progress

KM 38+809.6~38+832.4 HW RHS; Rigid pavement concrete placing in progress

KM 2+130~2+180 FW LOOP-III; SG top layer grading & compaction in progress

KM 41+600~41+800 RHS; Hill cutting in progress

KM 27+300~27+400 FW; WBM Base spreading & compaction in progress

KM 38+350~38+425 FW; WBM Base dumping in progress

KM 39+000~39+250 FW; WBM Base leveling & dry compaction in progress

KM 42+600~42+700 FW; Flexible pavement completed

BRIDGES

Bridge at KM 27+000 pesh side; Approach slab concrete casted

Bridge at KM 27+000 torkham side; steel rebar fixing for Approach sab is in progress

Bridge at KM 27+000; fixing of Bridge railing is in progress

RETAINING WALLS

KM 33+735~33+750 RHS; Ret wall stone masonry in progress

KM 36+350~36+450 RHS; Ret wall stone masonry in progress

KM 38+505~38+560 LHS; Ret wall stone masonry in progress

KM 38+720~38+756 LHS; Ret wall stone masonry in progress

KM 38+975~39+000 LHS; Ret wall masonry in progress

KM 39+150~39+275 LHS; Ret wall stone masonry in progress

CULVERTS

Culvert 2+183 LOOP-III; compaction of backfill material Abt wall-II is in progress

Culvert 2+529 LOOP-III; Dismantling of central pier is in progress due to poor quality of work

Culvert 33+758 LKL Link;Wing wall thickness from top to bottom varies

culvert 35+149; steel rebar & formwork fixing for top slab is. in progress

Culvert 38+230; concrete for the bottom slab cast

Culvert 39+890; lean concrete cast

DRAINS

KM 24+500~24+550 LHS; Drain type D-3 concrete placing in progress.

KM 29+775~29+925 RHS; Drain type D4 concrete placing in progress

KM 30+300~30+350 RHS; RCC Drain wall construction in progress

KM 30+500~30+550 LHS; RCC Drain wall construction in progress

KM 30+790~30+850 RHS; RCC Drain in progress

KM 32+150~32+190 RHS; Drain type D-1A completed

USAID / AGES Official Site Visit

MISCELLANEOUS

KM 7+500 LHS; Plaster work of weigh station building is in progress.

KM 15+900 RHS; Brick masonry for Monument is in progress

FIELD / LAB TESTS

Coring of ABC & AWC at KM; 42+233 (2)

FDT of Sub base at KM: 39+235

FDT of WBM at KM; 26+815 (1)

FDT of WBM at KM; 26+815 (2)

Monitoring & sampling of AWC at KM;14+900 Milling Area

Sampling of ABC at KM;35+860